

ANEXURE - 1

IDLER ROLLER - DATA SHEET

Sl. No.	Item Description	Specification	
1	(Refer Sketch - 1, Item - 1) Impact Idlers 190 / 139.7 x 670 x 28 as per IS : 8598, 1987, Latest Revision		
1.1	Steel tubes for Idler shell	ERW pipe (confirming to IS: 9295, 1983, Latest Revision) Nominal Dia. 139.7 mm , Length 670 mm (Shaft Length 702 mm) nominal Thickness : 4.85 mm Maximum radial run out ± 0.8 mm (TIR 1.6 mm as per IS : 8598) Preferred Make : TATA / SAIL / JINDAL / NEZONE / UTKARSH / PSST	
1.2	Spindle	The spindle shall be made of EN-9 / BS - 970 / 45 C8, IS : 1570 material The bearing portion of the spindle shall be ground to ($\Delta\Delta\Delta$) finish	
1.3	Bearings	The bearings shall be deep groove ball bearing 6207 Z (C3 clearance) Make : SKF / FAG L10 Bearing Life Shall be > 40,000 hrs	
1.4	Bearing Housing	The bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 Minimum Sheet Thickness : 3.15 mm Bearing housing edge shall be atleast 5 mm inwards of idler edge The bearing shall be press fit. The interference fit over race shall be M7. The bearing housing shall be welded carefully to avoid distortion	
1.5	Circlip	External Circlip as per IS : 3075, Material Spring Steel (Heavy Duty)	
1.6	Seals - Inner & outer labyrinth, - Inner back seal & - Rain Cap	The idlers shall be provided with multi labyrinth seals to prevent ingress of dust & moisture into the bearing housing. Seal Material : Nylon-6	
1.7	Lubrication	The bearings shall be packed with Lithium based grease with water repellent & high flash point charecteristics Sealed for Life.	
1.8	Dust Cover (outer Seal)	The Bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 (Galv.)	
1.9	Interchangeability	The idlers shall be made with close tollerance to have 100% interchangeability	
1.10	Rubber	Rubber discs for Impact idlers Shall be natural rubber & shall be fitted on to the steel tube with sufficient interference fit.	
		Hardness 65 ± 5 on Shore scale A	Sp. Gravity of Rubber ≤ 1.15
		Minimum Tensile Strength 240 Kg/cm ²	Elongation at Break 450 % (minimum)
		maximum Ash Content 11%	Abrassion = 250 mm ³ (as per DIN 53516)
1.11	Marking	Embossing / Punching on each idler on Outer cover (CHP 2) Letter Size about 10 mm	
1.12	Dimensional tollerances	The dimensional tollerances shall be as per IS : 2102 (Part - 1)	
1.13	Friction Factor	The friction Factor shall be within 0.015 (as per BIS : 11592, 2000)	

Note :-

The successful bidder shall submit QAP for approval by the purchaser (Typica QAP is attached for ready reference)

The bidder shall also take exact dimensions of the idlers to avoid any fitment issue.

Sl. No.	Item Description	Specification
2	(Refer Sketch - 2, Item - 2) Carrying Idlers 152.4 x 670 x 22 as per IS : 8598, 1987, Latest Revision	
2.1	Steel tubes for Idler shell	ERW pipe (confirming to IS: 9295, 1983, Latest Revision) Nominal Dia. 152.4mm , Length 670 mm (Shaft Length 702 mm) nominal Thickness : 4.85 mm Maximum radial run out ± 0.8 mm (TIR 1.6 mm as per IS : 8598) Preferred Make : TATA / SAIL / JINDAL / NEZONE / UTKARSH / PSST
2.2	Spindle	The spindle shall be made of EN-9 / BS - 970 / 45 C8, IS : 1570 material The bearing portion of the spindle shall be ground to ($\Delta\Delta\Delta$) finish
2.3	Bearings	The bearings shall be deep groove ball bearing 6206 Z (C3 clearance) Make : SKF / FAG L10 Bearing Life Shall be > 40,000 hrs
2.4	Bearing Housing	The bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 Minimum Sheet Thickness : 3.15 mm Bearing housing edge shall be atleast 5 mm inwards of idler edge The bearing shall be press fit. The interference fit over race shall be M7. The bearing housing shall be welded carefully to avoid distortion
2.5	Circlip	External Circlip as per IS : 3075, Material Spring Steel (Heavy Duty)
2.6	Seals - Inner & outer labyrinth, - Inner back seal & - Rain Cap	The idlers shall be provided with multi labyrinth seals to prevent ingress of dust & moisture into the bearing housing. Seal Material : Nylon-6
2.7	Lubrication	The bearings shall be packed with Lithium based grease with water repellent & high flash point charecteristics Sealed for Life.
2.8	Dust Cover (outer Seal)	The Bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 (Galv.)
2.9	Interchangeability	The idlers shall be made with close tollerance to have 100% interchangeability
2.11	Marking	Embossing / Punching on each idler on Outer cover (CHP 2) Letter Size about 10 mm
2.12	Dimensional tollerances	The dimensional tollerances shall be as per IS : 2102 (Part - 1)
2.13	Friction Factor	The friction Factor shall be within 0.015 (as per BIS : 11592, 2000)

Note : -

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The bidder shall also take exact dimensions of the idlers to avoid any fitment issue.

Sl. No.	Item Description	Specification
3	(Refer Sketch - 3, Item - 3) Return Idlers 152.4 x 2000 x 28 as per IS : 8598, 1987, Latest Revision	
3.1	Steel tubes for Idler shell	ERW pipe (confirming to IS: 9295, 1983, Latest Revision) Nominal Dia. 152.4 mm , Length 2000 mm (Shaft Length 2036 mm) nominal Thickness : 4.85 mm Maximum radial run out \pm 0.8 mm (TIR 1.6 mm as per IS : 8598) Preferred Make : TATA / SAIL / JINDAL / NEZONE / UTKARSH / PSST
3.2	Spindle	The spindle shall be made of EN-9 / BS - 970 / 45 C8, IS : 1570 material The bearing portion of the spindle shall be ground to ($\Delta\Delta\Delta$) finish
3.3	Bearings	The bearings shall be deep groove ball bearing 6207 Z (C3 clearance) Make : SKF / FAG L10 Bearing Life Shall be > 40,000 hrs
3.4	Bearing Housing	The bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 Minimum Sheet Thickness : 3.15 mm Bearing housing edge shall be atleast 5 mm inwards of idler edge The bearing shall be press fit. The interference fit over race shall be M7. The bearing housing shall be welded carefully to avoid distortion
3.5	Circlip	External Circlip as per IS : 3075, Material Spring Steel (Heavy Duty)
3.6	Seals - Inner & outer labyrinth, - Inner back seal & - Rain Cap	The idlers shall be provided with multi labyrinth seals to prevent ingress of dust & moisture into the bearing housing. Seal Material : Nylon-6
3.7	Lubrication	The bearings shall be packed with Lithium based grease with water repellent & high flash point charecteristics
3.8	Dust Cover (outer Seal)	The Bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 (Galv.)
3.9	Interchangeability	The idlers shall be made with close tollerance to have 100% interchangeability
3.11	Marking	Embossing / Punching on each idler on Outer cover (CHP 2) Letter Size about 10 mm
3.12	Dimensional tollerances	The dimensional tollerances shall be as per IS : 2102 (Part - 1)
3.13	Friction Factor	The friction Factor shall be within 0.015 (as per BIS : 11592, 2000)

Note : -

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The bidder shall also take exact dimensions of the idlers to avoid any fitment issue.

Sl. No.	Item Description	Specification
4	(Refer Sketch - 4, Item - 4) Return Idlers 152.4 x 1000 x 22 as per IS : 8598, 1987, Latest Revision	
4.1	Steel tubes for Idler shell	ERW pipe (confirming to IS: 9295, 1983, Latest Revision) Nominal Dia. 152.4 mm , Length 1000 mm (Shaft Length 1036 mm) nominal Thickness : 4.85 mm Maximum radial run out \pm 0.8 mm (TIR 1.6 mm as per IS : 8598) Preferred Make : TATA / SAIL / JINDAL / NEZONE / UTKARSH / PSST
4.2	Spindle	The spindle shall be made of EN-9 / BS - 970 / 45 C8, IS : 1570 material The bearing portion of the spindle shall be ground to ($\Delta\Delta\Delta$) finish
4.3	Bearings	The bearings shall be deep groove ball bearing 6206 Z (C3 clearance) Make : SKF / FAG L10 Bearing Life Shall be > 40,000 hrs
4.4	Bearing Housing	The bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 Minimum Sheet Thickness : 3.15 mm Bearing housing edge shall be atleast 5 mm inwards of idler edge The bearing shall be press fit. The interference fit over race shall be M7. The bearing housing shall be welded carefully to avoid distortion
4.5	Circlip	External Circlip as per IS : 3075, Material Spring Steel (Heavy Duty)
4.6	Seals - Inner & outer labyrinth, - Inner back seal & - Rain Cap	The idlers shall be provided with multi labyrinth seals to prevent ingress of dust & moisture into the bearing housing. Seal Material : Nylon-6
4.7	Lubrication	The bearings shall be packed with Lithium based grease with water repellent & high flash point charecteristics Sealed for Life.
4.8	Dust Cover (outer Seal)	The Bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 (Galv.)
4.9	Interchangeability	The idlers shall be made with close tollerance to have 100% interchangeability
4.11	Marking	Embossing / Punching on each idler on Outer cover (CHP 2) Letter Size about 10 mm
4.12	Dimensional tollerances	The dimensional tollerances shall be as per IS : 2102 (Part - 1)
4.13	Friction Factor	The friction Factor shall be within 0.015 (as per BIS : 11592, 2000)

Note : -

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The bidder shall also take exact dimensions of the idlers to avoid any fitment issue.

Sl. No.	Item Description	Specification
5	(Refer Sketch - 4, Item - 4) Non Magnetic Carrying Idlers 152.4 x 670 x 22 as per IS : 8598, 1987, Latest Revision	
5.1	Steel tubes for Idler shell	ERW pipe (confirming to IS: 9295, 1983, Latest Revision) Idler Tube material shall be SS - 304 Nominal Dia. 152.4 mm , Length 1000 mm (Shaft Length 1036 mm) nominal Thickness : 4.85 mm Maximum radial run out \pm 0.8 mm (TIR 1.6 mm as per IS : 8598) Preferred Make : TATA / SAIL / JINDAL / NEZONE / UTKARSH / PSST
5.2	Spindle	The spindle shall be made of EN-9 / BS - 970 / 45 C8, IS : 1570 material The bearing portion of the spindle shall be ground to ($\Delta\Delta\Delta$) finish
5.3	Bearings	The bearings shall be deep groove ball bearing 6206 Z (C3 clearance) Make : SKF / FAG L10 Bearing Life Shall be > 40,000 hrs
5.4	Bearing Housing	The bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 Minimum Sheet Thickness : 3.15 mm Bearing housing edge shall be atleast 5 mm inwards of idler edge The bearing shall be press fit. The interference fit over race shall be M7. The bearing housing shall be welded carefully to avoid distortion
5.5	Circlip	External Circlip as per IS : 3075, Material Spring Steel (Heavy Duty)
5.6	Seals - Inner & outer labyrinth, - Inner back seal & - Rain Cap	The idlers shall be provided with multi labyrinth seals to prevent ingress of dust & moisture into the bearing housing. Seal Material : Nylon-6
5.7	Lubrication	The bearings shall be packed with Lithium based grease with water repellent & high flash point charecteristics Sealed for Life.
5.8	Dust Cover (outer Seal)	The Bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 (Galv.)
5.9	Interchangeability	The idlers shall be made with close tollerance to have 100% interchangeability
5.11	Marking	Embossing / Punching on each idler on Outer cover (CHP 2) Letter Size about 10 mm
5.12	Dimensional tollerances	The dimensional tollerances shall be as per IS : 2102 (Part - 1)
5.13	Friction Factor	The friction Factor shall be within 0.015 (as per BIS : 11592, 2000)

Note : -

The successful bidder shall submit QAP for approval by the purchaser (Typica QAP is attached for ready reference)

The bidder shall also take exact dimensions of the idlers to avoid any fitment issue.

Sl. No.	Item Description	Specification	
9	(Refer Sketch - 5, Item - 9) Self Cleaning Idlers 190 / 139.7 x 2000 x 28 as per IS : 8598, 1987, Latest Revision		
9.1	Steel tubes for Idler shell	ERW pipe (confirming to IS: 9295, 1983, Latest Revision) Nominal Dia. 139.7 mm , Length 2000 mm (Shaft Length 2036 mm) nominal Thickness : 4.85 mm Maximum radial run out ± 0.8 mm (TIR 1.6 mm as per IS : 8598) Preferred Make : TATA / SAIL / JINDAL / NEZONE / UTKARSH / PSST	
9.2	Spindle	The spindle shall be made of EN-9 / BS - 970 / 45 C8, IS : 1570 material The bearing portion of the spindle shall be ground to ($\Delta\Delta\Delta$) finish	
9.3	Bearings	The bearings shall be deep groove ball bearing 6207 Z (C3 clearance) Make : SKF / FAG L10 Bearing Life Shall be > 40,000 hrs	
9.4	Bearing Housing	The bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 Minimum Sheet Thickness : 3.15 mm Bearing housing edge shall be atleast 5 mm inwards of idler edge The bearing shall be press fit. The interference fit over race shall be M7. The bearing housing shall be welded carefully to avoid distortion	
9.5	Circlip	External Circlip as per IS : 3075, Material Spring Steel (Heavy Duty)	
9.6	Seals - Inner & outer labyrinth, - Inner back seal & - Rain Cap	The idlers shall be provided with multi labyrinth seals to prevent ingress of dust & moisture into the bearing housing. Seal Material : Nylon-6	
9.7	Lubrication	The bearings shall be packed with Lithium based grease with water repellent & high flash point charecteristics Sealed for Life.	
9.8	Dust Cover (outer Seal)	The Bearing Housing shall be made of Extra deep drawn quality CRCA Sheet, as per IS : 513 (Galv.)	
9.9	Interchangeability	The idlers shall be made with close tollerance to have 100% interchangeability	
9.10	Rubber	Rubber discs for Self cleaning idlers Shall be natural rubber & shall be fitted on to the steel tube with sufficient interference fit.	
		Hardness 65 ± 5 on Shore scale A	Sp. Gravity of Rubber ≤ 1.15
		Minimum Tensile Strength 240 Kg/cm ²	Elongation at Break 450 % (minimum)
		maximum Ash Content 11%	Abrassion = 250 mm ³ (as per DIN 53516)
9.11	Marking	Embossing / Punching on each idler on Outer cover (CHP 2) Letter Size about 10 mm	
9.12	Dimensional tollerances	The dimensional tollerances shall be as per IS : 2102 (Part - 1)	
9.13	Friction Factor	The friction Factor shall be within 0.015 (as per BIS : 11592, 2000)	